



John Polanyi University Professor first scientist to be so honoured

Dr. John Polanyi, professor of chemistry and a fellow of the Royal Society of London, has been appointed a University Professor.

President John Evans, in announcing "this honour reserved for a very small number of distinguished academicians at the University of Toronto", said the appointment was in recognition of the "outstanding contribution which (Dr. Polanyi) has made at this University to scholarship and teaching in his discipline".

There are five other University Professors: Dr. Claude Bissell, a former President; Dr. Donald Creighton and Dr. Charles P. Stacey, both historians; Dr. H. Northrop Frye, formerly principal of Victoria College; and Dr. Douglas V. LePan, formerly principal of University College. None is a scientist. Bestowal of the honour, which has been likened by some to an honorary degree, is a personal prerogative of the President and carries no salary.

The son of Michael Polanyi, the well known physical chemist and philosopher of science, John C. Polanyi was educated in Britain and received his Ph.D. in 1952 from Manchester University. After graduation, he came to Canada, where he spent two years as a post-doctoral fellow of the National Research Council in Ottawa and two years at Princeton University, N.J. In 1956, he joined the University of Toronto, where he rose quickly from the rank of lecturer to that of professor by the age of 33.

Dr. Polanyi's work from the start has

Nominations close today for General Committee

Nominations close today for positions on the General Committee of the Faculty of Arts and Science Council and other committees of the Council. Nomination forms and a list of vacancies are available at the Faculty Office, Room 1006, Sidney Smith Hall, college offices and departmental offices. These forms must be returned to the Faculty office, no later than 4 p.m. today. Forms received after that time will not be valid.

been chiefly concerned with the chemistry of molecules—the smallest groupings of atoms that are normally able to lead an independent existence. His aim has been to obtain detailed cinematographic pictures of chemical reactions involving two or more molecules. He believes that such pictures should provide "some understanding of the forces that buffet the molecules as they come close together, embrace, exchange partners and finally retreat as new molecules."

One of the phenomena that he exploited in his early research and has continued with ever since is that of "chem-luminescence", the emission of light, particularly infra red light at low pressure, brought about by chemical reaction—a phenomenon that he was the first to observe.

In 1960, the idea of the laser, (Light Amplification by Stimulated Emission of Radiation) had already been proposed by Charles H. Townes and Arthur Schawlow. It was that, if light were passed through matter that was electronically excited, the light could be amplified.

Before any device had been made to work, John Polanyi proposed, in a paper of his own, that the vibration of molecules, rather than their electronic excitation, might also form the basis of a light-amplified device.

He further proposed correctly that the freshly formed products of chemical reactions could be used to supply this excitation. He gave to this principle the name *Inaser* (for *Infra Red Amplification by Stimulated Emission of Radiation*). Scientists of the University of California later showed his prediction to be correct. While the name did not catch on, the

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BULLETIN DEADLINE

The University of Toronto Bulletin is published on an *ad hoc* basis, generally once a week on Fridays. Copy should be typewritten and double-spaced. The deadline for most material is seven days before publication.

E M Gruetzner is director Continuing Studies School

Edward M. Gruetzner, acting director of the Division of University Extension since 1970, has been appointed director of a new School of Continuing Studies, which, with Woodsworth College, has replaced Extension as the source of programs and courses for those seeking education through evening and summer part-time study.

The Academic Affairs committee of Governing Council adopted the recommendation of one of its sub-committees, which proposed that the work carried out for some 80 years by Extension be divided into two parts: a college (for which Governing Council in January approved the name Woodsworth) for teaching undergraduate credit courses in evenings and the summer-time, and a separate unit (now School of Continuing Studies) for non-credit courses and programs.

Woodsworth College is headed by Prof. Arnold Kruger, whose appointment as the first principal was made public last month.

The sub-committee gave this as the reason for proposing to drop the traditional name Extension and providing a college and a school instead:

"As far as possible, students attending evening and summer courses should have access to the same components of University life as is available to those attending the regular winter day sessions. The name 'University Extension' does not convey this integral relationship."

Mr. Gruetzner, whose friends call him Bud, after attending elementary and secondary schools in Hanover, Ont., earned a B.A. degree at the University of Toronto, graduating in 1948. His first

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The deadline is noon on Monday for filing of nomination papers

Prospective candidates for election to the Governing Council are reminded that nomination papers must be filed by noon on Monday, Feb. 18. Nomination forms and copies of the regulations (Election Guidelines) are available from the Office of the Governing Council, Simcoe Hall, or the Registrars' offices at Scarborough and Erindale Colleges.

There are vacancies in four teaching staff constituencies, all eight seats in the three student categories, and one seat in the administrative staff constituency.

Nominations must be signed by the following number of nominators: teaching staff—10; graduate students—15; full-time undergraduate students—50; part-

time undergraduate students—15; administrative staff—20.

Present members of the Governing Council whose terms expire on June 30 next may be nominated again if they are continuing in the same constituencies for which they were elected in 1973. Those elected this year from the teaching staff and administrative staff constituencies will serve for three years from July 1, 1974, and from student constituencies for one year, as required by *The University of Toronto Act, 1971*.

Descriptions of the constituencies were published in the Bulletin on Jan. 25. Further information may be obtained from the Office of the Governing Council at 928-2160.

Half of adults are over-weight says leading British nutritionist

Our greatest nutritional problem today is the imbalance of energy intake and energy output, Dorothy Hollingsworth, director general of the British Nutrition Foundation, told a University of Toronto audience last week. Miss Hollingsworth's address on "Nutritional Problems in an Affluent Society" was one of a series of lectures on nutrition sponsored by General Foods, Limited and presented in co-operation with four Canadian universities.

The speaker noted that the recent national survey by the federal Department of National Health and Welfare, called "Nutrition Canada", showed that obesity was a major problem in Canada, with more than half the adult population being over-weight.

Miss Hollingsworth pointed out that the modern style of living makes it hard to get sufficient exercise and easy to eat a lot of energy-rich foods. Therefore, we should seek to redress the balance. "By far the more important course is to increase physical activity by any means available. It is best for it to be constant, moderate activity and not occasional spurts of intense activity, though—for the fit and healthy—spasmodic intense activity probably helps to keep not only the body in general but the heart muscle in particular, in good shape."

A pound of fat is equivalent to about 3,500 calories. "If a person wants to lose a pound of body fat a week (and this is a reasonable amount to lose), either he or she must expend an extra 500 calories a day by, say, walking at a moderate speed for an extra two hours a day, running half for half-an-hour, playing tennis vigorously for an hour, or eating two

ounces less oil or 4½ ounces less sugar, or drinking three pints of beer a day, or any suitable combination of these calculations—or by many others," she said.

She warned against fat diets. "They don't work and they may lead to nutritional deficiencies." Referring to coronary heart disease as "the scourge of modern life", and emphasizing that there is no consensus of opinion on how to prevent it, Miss Hollingsworth said:

"There are many risk factors—having the wrong grandparents, taking too little exercise, obesity, cigarette smoking, living in a soft water area, being a man of middle age, eating too much saturated fat, eating too much sugar and even, perhaps, eating too little dietary fibre."

Her suggestions: "Experience foods widely; indulge appetite temperately. Eat a little of everything and not too much of any one thing. Conclude a meal feeling you could eat more. Do not take more than you can consume. Don't prorate more food than should be consumed."

Walter Hall rededication to be held on Feb 21

On Thursday, Feb. 21, during the concert "Music in the Twenties" President John Evans will dedicate Walter Hall (formerly the Concert Hall) in the Edward Johnson Building, in memory of Dr. Arnold Maria Walter, Director of the Faculty of Music from 1952 to 1968, who died suddenly on Oct. 6, 1973.

At the same time formal announcements and a description of the Arnold Walter Memorial Award will be made.



HIS EXCELLENCY the Ambassador of the People's Republic of China, Chang Wen-Chin, paid a visit to the University last Monday. In this picture are seen (left to right, front row) Mrs. Chang, wife of the Ambassador; Prof. John Saywell, chairman of East Asian Studies; the Ambassador; and President John Evans. Behind them are two members of the embassy staff. During the visit, Dr. Evans presented to Mr. Chang a framed photograph of Dr. Norman Bethune, taken when the surgeon who won fame in China graduated from U of T. Later the Ambassador and his party were taken on a tour of the campus, culminating in a call at the Thomas Fisher Rare Book Library to see the Norman Bethune collection there.

Special lecture series celebrates School of Continuing Studies

To celebrate the institution of the School of Continuing Studies and commemorate the 80-years of tradition of the former Division of University Extension, a free public lecture series, "Patterns and problems of growth," is to be held through March and April.

The object of the series, the School says, is to contribute to the dissemination of information on the problems arising from the accelerating rates of growth in various areas of society by having specialists from different disciplines discuss the issues in their respective fields.

The lectures will be held each Thursday, at 7.45 p.m., from March 7 to April 25 inclusive, in the Medical Sciences Building. There is no charge, but reserved seat tickets may be obtained from the School of Continuing Studies, 119 St. George St. Rush seats without a series ticket will be available to the extent the accommodation will permit.

Co-ordinators of the series are Prof.

Thomas Goudge, Philosophy, and Prof. Arthur Porter, Industrial Engineering.

Subject titles and speakers are:
March 7 - "Growth in the demand for energy," Dr. Ian E. Efford, science adviser, Science Council of Canada.

March 14 - "Growth function in animal (including human) populations," Prof. Donald Chant, chairman, Zoology.

March 21 - "Growth in understanding of the physical cosmos," Dr. Helen Hogg, Astronomy.

March 28 - "Control of Environmental pollution," Prof. James E. Guillet, Chemistry.

April 4 - "Economics of the issue of growth," Prof. N. Harvey Lithwick, Economics, Carleton University.

April 11 - "Urban growth," Prof. Michel Chevalier, Environmental Studies, York University, and Urbanism, Université de Montréal.

April 18 - "Growth of knowledge," Prof. Thomas Goudge, Philosophy.

April 25 - Panel summation and discussion of the series.

Russian summer program course offered to scholarly researchers

"Russian for Scholarly Researchers" will be a new offering in the annual Summer Russian Workshop this year, sponsored by the Division of Extension and the Centre for Russian and East European Studies. Students and professors in political economy, literature or

science whose research encompasses books or papers written in Russian will quickly increase their comprehension of the written language. Teaching methods will stress recurrent phrases in academic prose use of dictionaries, and rapid scanning of papers to ascertain their value to the researcher.

Prof. Irina Evreinov, executive director of the program, said that the course would also benefit business men and others who plan to visit the Soviet Union or trade with it. Credit courses in oral and written Russian, at elementary, intermediate and advanced levels, will again be offered, as well as non-credit reading courses in Russian literature and in Russian history and social sciences. There is also a course which prepares participants in the Canadian-Soviet program or similar exchanges.

For further information and applications, get in touch with Prof. Irina A. Evreinov, Executive Director, Summer Russian Workshop, Sidney Smith Hall room 5024, University of Toronto (928-2304). Tuition is \$200.

Russian and East European Studies

PROF. H. GORDON SKILLING participated as a member of the panel on "National Communism in Eastern Europe" at the American Historical Association conference in San Francisco held from Dec. 27 to 31.

Sophisticated radar is developed for icebreaker reconnaissance

A new and sophisticated form of radar, developed by U of T engineers, has been successfully tested in the Toronto Island Parks. Known as HISS (for Holographic Ice-Surveying System), the radar is for use by the reconnaissance helicopters of icebreakers in the far north and on major inland water ways.

The HISS down-looking radar - a completely new approach - was made possible by the development of computer-operated ultra-high-speed switching systems. The team that devised it includes Dr. Keigo Iizuka, associate professor of Electrical Engineering; Dr. Y.L. Yen, professor in the same department; Dr. Hisano Ogura, a visiting professor from Kyoto, Japan; Van Khai Nguyen, a graduate student from Vietnam, and Bernard Maillard, technician.

Prof. Yen achieved world-wide recognition several years ago when he used three atomic clocks and a videotape recorder to link, first a radio telescope in Penitence, B.C., with one in Algonquin Park, and then the Penitence antenna with the giant radio antenna dish at Jodrell Bank in England. He thus created a system for probing the outlying reaches of space with the powers of discrimination of a single radio telescope some thousands of miles in diameter.

Measuring thick ice from the air provides a number of problems. Perhaps the most important of these is the fact that two separate reflections need to be obtained and processed. The one from the top is easy. That from the underside, the sea-ice-water interface, is more difficult because of the enormous power required in the radar beam to penetrate ice containing salt.

The U of T team decided that, since halving the distance from the radar reduces the energy required by the fourth power, or by a factor of 16 times, the thing to do was to get as near to the ice as possible. But conventional radar cannot operate near to its target because of the very short intervals between transmission and reception signals.

Because of this, Dr. Iizuka and his colleagues tried a different approach, using a principle entirely new to radar. As he explains in simplified lay language, the solution was akin to that of throwing pebbles into a pond from a dock and calculating how far away the point of entry was by the curvature of the ripples as they reached the dock. If the stone falls only a few feet away, the ripples will be of a small radius of curvature. If further away, the curve will be commensurately flatter.

In this case, of course, there are two sets of ripples of radar energy, one from the top of the ice and the second from the bottom interface. To measure both at a number of different points along the antenna, split-second timing, split millionths, was required when the measurements were to be made from a moving platform. To meet this, Dr. Yen was asked to design a special computer to perform these calculations and control the set.

The radar system requires 64 separate horns on a boom 24 feet long, and the entire apparatus is carried by helicopter. It uses radio waves in the 10 cm. band and, because the helicopter flies at an altitude of only about 10 feet above the ice, the energy transmitted to the ice by the set is equivalent to that transmitted

by a 100 million watt set (equivalent to one large generator in a central power station) if operating at the minimum altitudes employed for conventional radar.

The first operational tests were carried out late in May, 1972, at Tuktoyuk in the Northwest Territories, 60 miles north of Inuvik on the Mackenzie River Delta, where the ice was sometimes six feet thick. Because the airborne computer was not ready, the received signals were recorded and flown back to Toronto to be processed by the University's central computer. However, the results were promising.

The design and construction of a suitable airborne computer that could work in real time still presented substantial problems and it is only now, one-and-one-half years later, that the team has been able to produce a total, fully integrated system.

In the Toronto Island tests, for convenience and to reduce costs, a crane has been used to suspend the 24-foot long boom antenna over the ice. Additional thickness has been achieved by ordering block ice from Lake Simcoe and piling this on top of the natural ice.

Many applications for the new system are foreseen, one of which has been shown to produce consistently reliable results and has been developed in a commercially saleable form. An obvious one, says Prof. Iizuka, is that of assisting in the surveying of transportation routes for heavy equipment, such as oil rigs on frozen lakes, rivers and tundra, and the choice of air fields.

Another potential application would be in locating safe drilling sites. Dr. Iizuka points out that, when drilling rigs are passed through thick ice on to sloping ground, the danger of lateral movement of the ice later that will shear expensive equipment and render the whole operation useless.

With the new radar, it should be possible to produce "upside down" and cross-sectional maps of ice and, by repeating the operation at stated intervals, to observe how specific areas of ice are moving. In this way it should be possible to indicate, well ahead of time, the route that formidable accretions of ice will take in restricted areas.

It is of interest that the system promises to measure ice up to four metres deep, approximately the penetration capability of the most powerful icebreakers. It might thus be used to help choose favourable routes.

Away from water, the assistance of the team has also been sought by companies interested in mining salt because of its likely ability to measure depths, detect cracks and other faults running through beds in open cast mines.

Professor Iizuka stresses that the system also offers very interesting possibilities for basic research. It has in fact already been used to measure the cross-sectional profile of salinity in sea ice and the dielectric and loss tangents, parameters that are of fundamental importance in improving the effectiveness of such radar systems.

The work has been conducted under contract with the Canada Centre for Remote Sensing of the Department of Energy, Mines and Resources.

Executive Associate required by OCUFA

Applications are now being accepted for the post of Executive Associate with the Ontario Confederation of University Faculty Associations.

The successful applicant will work closely with the Executive Vice-Chairman serving the professional needs of university faculty members in Ontario and promoting the welfare of the universities. While the applicant might now be an Associate or Assistant Professor, the selection committee does not limit applications to those with a specifically academic background. The job may be full-time but consideration will be given to academic applicants who want to retain a reduced teaching appointment at a university.

The salary will be negotiated. Benefits

are comparable to those prevailing in Ontario universities.

Applications should be directed to the Chairman, Selection Committee, OCUFA, 40 Sussex Ave., Toronto M5S 1J7.

EXHIBITIONS

Camera Club exhibition, Hart House Art Gallery, Feb. 25-March 8.

"People's Art: Naïve Art in Canada" - a major exhibition of oils, watercolours, sculpture and a variety of primitive, naïve, folk, and popular science in Canada. From the National Gallery of Canada. Sigmund Samuel Canadiana Building. To March 10. Special tour on Feb. 27 at 12.15 p.m.

COMING EVENTS

Friday 15 February

LECTURE: Soviet - "Twin Roots of Soviet Meshchanstvo". Prof. Vera Dunham, Slavic Department, Wayne State University. Council Chamber, Galbraith Building. 2 p.m. (Russian and East European)

LECTURE: Dentistry - "Management of the Difficult Edentulous Mandible". Dr. W. R. Laney, Prosthodontics, Mayo Clinic. Room 6, 123 Edward St. 12 noon (Dentistry)

COLLOQUIUM: Chemistry - "Molecular Structure and Exciton Upconversion in Photosynthetic Reaction-center Chlorophylls". Prof. F. K. Fong, Purdue University. 158 Lash Miller Chemical Laboratories. 4 p.m. (SGS and Chemistry)

Saturday 16 February

LECTURE: Floods - "Flood Protection and Control". Donald N. McMullen, Hydro-meteorologist, Conservation Authorities Branch, Ontario Ministry of Natural Resources. Convocation Hall. 8.15 p.m. (Royal Canadian Institute) This day is exactly the 125th anniversary of the Royal Canadian Institute - Honorary membership will be conferred on The Rt. Hon. Roland Michener.

MUSIC - student composers Symposium Concerts. Music Schools from Ontario and Quebec expected to be in attendance. Concert Hall, Edward Johnson Building. 2 and 8 p.m. No tickets, no charge.

Sunday 17 February

SERVICE - Vespers Service; music by Ayleward, Boyce and Daniel Purcell. Massey College Chapel. 5 p.m. Visitors welcomed.

Monday 18 February

SEMINAR: Medicine - "Mechanism of Action of the Hypothalamic Hormones in the Anterior Pituitary Gland". Dr. Fernand Labrie, Le Centre Hospitalier de l'Université Laval, Quebec. 417 Best Institute. 4 p.m. (Banting and Best)

Tuesday 19 February

LECTURE: Medicine - "Surgical Treatment of Cerebral Aneurysms". Dr. C. G. Drake, University of Western Ontario, (Election meeting for T.N.S. members). Osler Hall. 5 p.m. (Neuroscience Institute, U of T and Toronto Neurological Society)

Wednesday 20 February

SEMINAR: Education - "Issues in Education, Secular and Religious, From a World Perspective". William B. Kennedy, Executive Secretary, Office of Education, World Council of Churches, Board Room, 12th floor, 252 Bloor St. W. (OISE)

DANCE - Toronto Dance Theatre. Armour Court, ROM. 5.30 p.m. Free

Thursday 21 February

LECTURE: History of Science - "PUNCH on the Machine, 1842-1900". George Basalla, University of Delaware. 205 Library Science. 8 p.m. (IHPSST)

LECTURE: Law - "The Sixth Annual Cecil A. Wright Memorial Lecture. "Canadian Administrative Law in Retrospect". Prof. John Willis Q.C., Dalhousie University. Moot Court, Faculty of Law. 4 p.m. (Law)

LECTURE: Oceanography 74 - "The Case Against Continental 'Drift'". Dr. A. A. Meyehoff. Museum Theatre. 8.30 p.m. Free (ROM)

COLLOQUIUM: Astronomy - "The Advanced Evolution of Population II Stars". Dr. Edward Barry Newell, Yale University Observatory. 134 McLennan Physical Laboratories. 4 p.m. (Astronomy)

COLLOQUIUM: History of Science - "Science and Technology in Popular Culture". George Basalla, University of Delaware. 225 Library Science. 4 p.m. (IHPSST)

LECTURE: Dentistry - "The Influences of Connective Tissues in Epithelial Carcinogenesis". Dr. C. J. Daw, Head, Comparative Oncology Section Laboratory of Pathology, Department of Health, Education and Welfare, Bethesda, Md. 308 Dental Building. 2 p.m. (Dentistry)

SEMINAR: Transportation - "Some Predatory Practices under Government Regulations". W. A. Jordan. 111 the Coachhouse, 150 St. George St. 2 p.m. (U of T/York Joint Program in Transportation)

MUSIC - Music of the Twenties - Faecade, an Entertainment by William Walton and Edith Sitwell; Chamber Orchestra; conductor Ezra Schabas; narrators: Gaynor Jones, Godfrey Ridout; Kemmerusik No. 4 by Hindemith; violin, David Zafer. Concert Hall, Edward Johnson Building. 8.30 p.m. Tickets \$3, students \$1.50; Cheques payable 'U of T'. Enclose stamped addressed envelope. (Music)

Saturday 23 February

LECTURE: Geology - "Fossil Sunshine". Prof. Gordon D. Williams, University of Alberta. Convocation Hall. 8.15 p.m. (Royal Canadian Institute)

MUSIC - New Chamber Orchestra. Great Hall, Hart House. 8.30 p.m. Tickets \$4, students \$2, available at HH.

Monday 25 February

SEMINAR: Geology - "Ice Sheet Surges and the Geological Record". Dr. J. T. Hollin, University of Maine at Orono. 128 Mining Building. 4 p.m. (Geology)

Tuesday 26 February

COLLOQUIUM: Astronomy - "Recent Galactic and Extragalactic Observations". Dr. S. van den Bergh; and "The Metallicity of Globular Clusters in M87". Dr. R. Racine. David Dunlap Observatory. 4 p.m. (Astronomy)

Wednesday 27 February

LECTURE: China - "The Cultural Revolution: China Rewrites her History". Prof. Jerome Ch'en, York University, author of "Mao and the Chinese Revolution". Library Science Lecture Theatre. 2 p.m. (SGS and History)

LECTURE: History - "Voltaire's Attitude towards Jews and Judaism". Prof. Jacob Katz, Hebrew University of Jerusalem. Lecture theatre, Library Science. 4 p.m. (SGS and History)

SEMINAR: History - "When Does Modern Jewish History Begin?" Prof. Jacob Katz. 3rd floor sitting room, Hart House. 10 a.m. - noon (SGS and History)

MEETING - Victoria Women's Association. Presentation by students of the Victoria College Music and Drama clubs. Wymindwood, 150 Charles St. W. 2 p.m.

DANCE - Toronto Dance Theatre. Armour Court, ROM. 5.30 p.m. Free

COLLOQUIUM: Psychology - "Edge and Colour Analyzing Channels in the Human Visual System". Prof. Richard Held, M. I. T. 2102 Sidney Smith Hall. 4.15 p.m. (OCAP and Psychology)

SEMINAR - "See What Tomorrow Brings". Hyatt Regency Hotel. From 12 noon (Forestry) See story on page 4.

Thursday 28 February

LECTURE: Dentistry - "Adherence in the Etiology of Oral Streptococci". Dr. R. J. Gibbons, Forsyth Dental Center, Boston. 108 Dental Building. 1 p.m. (Dentistry)

LECTURE: Oceanography 74 - "Heat Transport and Climatic Change in Arctic and Sub-arctic Seas". Dr. M. J. Dunbar. Museum Theatre. 8.30 p.m. Free (ROM)

SEMINAR: Environment - "Monitoring the World Environment". Dr. T. Muns, Atmospheric Environmental Service. 211 Haultain Building. 4 p.m. (Environmental Sciences and Engineering)

RESEARCH SEMINAR: Transportation - "Models of Federal Involvement in Urban Transportation in Canada". J. W. Langford, 111 Coachhouse, 150 St. George St. 2 p.m. (U of T/York Joint Program in Transportation)

COLLOQUIUM: Astronomy - "The Lost Planet - Some Speculations on the Evolution of the Solar System". Dr. M. W. Ovenden, University of British Columbia. 102 McLennan Physical Laboratories. 4 p.m. (Astronomy/Physics)

POETRY READING - Michael Ondaatje (Governor General's Award, 1970) Upper Brennan Hall, St. Michael's College. 4.10 p.m. Free (English, St. Michael's)

THEATRE - Shakespeare's Troilus and Cressida", Director, Martin Hunter. Hart House Theatre. Feb. 28 to March 9. 8.30 p.m. (Drama Centre)

MUSIC - Faculty of Music Student Ensembles. Concert Hall, Edward Johnson Building. 2.10 p.m. No tickets, no charge (Music)

MUSIC - Janacek Quartet. Concert Hall, Edward Johnson Building. 8.30 p.m. Tickets \$4, students \$2. Cheques payable 'U of T'. Enclose stamped addressed envelope (Music)

Friday 1 March

OPEN HOUSE - Rehabilitation Medicine (Occupational and Physical Therapy and Speech Pathology). Friday, 7 to 10 p.m. Saturday 11.30 a.m. to 3.30 p.m. Demonstrations and displays. (Rehabilitation Medicine)

SUPPER - Faculty Club "Chinese Night". Reception 5.30 to 6.30 p.m. Buffet 6.30 to 8.30 p.m.

Saturday 2 March

LECTURE: Lasers - "Progress in Lasers". Prof. B. P. Stoicheff, U of T. Convocation Hall. 8.15 p.m. (Royal Canadian Institute)

MUSIC - U of T Symphony Orchestra; conductor, Victor Feldbrill. MacMillan Theatre, Edward Johnson Building. 8.30 p.m. Free reserved tickets from 12 noon. Enclose stamped addressed envelope (limit two per person) (Music)

Monday 4 March

SEMINAR: Geology - "Implications of Magnetic Measurements for Lunar Impact Processes". Dr. W. Pearce. 128 Mining Building. 4 p.m. Refreshments 3.30 p.m. (Geology)

Tuesday 5 March

LECTURE: Medicine - "Nerve Growth Factor". Dr. R. A. Bradshaw, Washington University School of Medicine, St. Louis. 2172 Medical Sciences Building. 5 p.m. (Neuroscience Institute, U of T, and Toronto Neurological Society)

COLLOQUIUM: Astronomy - "The Historical Demand of Interstellar Matter". Dr. J. D. Fernie. David Dunlap Observatory. 4.10 p.m. (Astronomy)

Wednesday 6 March

PROGRAM: Women's Studies - "Toronto Radical Lesbians". Faculty of Education. 7 p.m. Free

Thursday 7 March

LECTURE: Kenya - "Development Problems in Kenya". Principal Ralph Campbell. 202 Galbraith Building. 12 noon (African Studies Committee, ISP)

LECTURE: Archaeology - "Art and History in Roman Relief Sculpture". Gerhard M. Koeppe, University of North Carolina. MacLaughlin Planetarium lecture room. 4.30 p.m. (Archaeological Institute of America, Toronto Society)

LECTURE: History of Science - "XVIII Century French Chemistry: Problems and Problematiques". Jean-Claude Guedon, Institut d'histoire et de sociopolitique des sciences, Université de Montréal. 205 Library Science. 8 p.m. (IHPSST)

International environmentalist to lecture

Dr. R.E. Munn, chief scientist with the Atmospheric Environment Service of Environment Canada, will visit the University on Thursday, Feb. 28. He will give a lecture on Global Environmental Monitoring and Impact Assessment Studies in Room 211, Haultain Building. This lecture is being sponsored by the Air Pollution Working Group of the Institute of Environmental Sciences and Engineering.

Dr. Munn without doubt ranks among the outstanding international scientists actively concerned with pollution problems and their effects upon the environment and human well-being. He is recognized as a global expert on air pollution, monitoring and boundary-layer meteorology on a world wide basis by his peers. This is evidenced by the fact that from a large group of candidates, he was selected as consultant to the United Nations Environment Programme (UNEP) and to the UN Inter-Agency Working Group on Monitoring to prepare an action plan for monitoring the world as part of Earth-watch of UNEP. His main output was a book, SCOPE 3, where he developed Global Environmental Monitoring Systems (GEMS), which is to be used as a background document for a large inter-

governmental meeting in Nairobi this month.

He is editor-in-chief of *Boundary-Layer Meteorology* (increased in 1973 from 500 to 1000 pages) and co-editor of a Geophysical series publication.

In June 1973 the Atmospheric Environment Service awarded him the J. Patterson Medal for distinguished service to meteorology in Canada. In January 1973 he was awarded the prize for Applied Meteorology by the American Meteorological Society.

Nature Art of Ontario exhibition is at Oakville

An exhibition of Contemporary Nature Art of Ontario is being displayed in Oakville Public Library and Centennial Gallery. It is believed to be the most comprehensive of its sort to date. It is estimated that perhaps nine-tenths of the works displayed have been lent from private collections of members of the Faculty of Medicine of the University of Toronto. The Gallery is at 121 Navy Street. The exhibition is open each weekday until Feb. 24 until 9 p.m., and on Sundays from 2 to 5 p.m.



CLOSED CIRCUIT television is used by Dr. Vidar Nordin, Dean of the Faculty of Forestry (left foreground), as an aid in the course he gives to all first year students of the Faculty on

"Effective Communication". Speakers see replays of their presentations as fellow students evaluate them. The camera filming the student and the monitor are on the right side of the room.

UTFA council against inquiry

The following is the text of a resolution adopted by the Council of the University of Toronto Faculty Association on Jan. 31, and released by the president, Prof. W. H. Nelson:

"The Council of the University of Toronto Faculty Association regrets the notice of motion made at the meeting of the Governing Council of the University on January 24th stating that:

"As a result of information brought to the attention of the Governing Council the Executive Committee should establish an investigation of alleged racist teaching in the Faculty of Medicine."

"The allegations implicit in this notice of motion are undefined, vague, and sweeping as well as defamatory. For the Governing Council to authorize inquiries into the teaching of any Faculty of the University as a result of such a motion, arising out of such circumstances as those at the last meeting of the Council, would be gravely irresponsible. We therefore strongly advise the Executive Committee of the Governing Council not to place this motion on the Agenda of any subsequent meeting."

John Polanyi named University Professor

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principle forms the basis for about half of all the lasers now in operation, including the most powerful system of all, the so-called CO₂ or carbon dioxide laser, first developed by C.K.N. Patel of Bell Laboratories.

Dr. Polanyi is the author or co-author of many scientific papers and has received numerous honours, including the Faraday Society's Marlow Medal. He was Centennial Lecturer of the Chemical Society of London in 1965 and in that year shared the F.E.W. Steacie Prize in the Natural Sciences, one of the most prized Canadian awards. He was elected Fellow of the Royal Society of London in 1971. Although much of his time is taken up with research - he has had more than 50 graduate students and post-doctoral fellows working under him during his period at U of T - he enjoys lecturing to first or second year students and is a favourite with high school pupils on departmental "at home" days. Like all scientists of his eminence, he is heavily burdened with committee work and the refereeing of scholarly presentations. Nevertheless, he still manages, somehow, to find time to contribute articles and participate in meetings about matters of public concern.

Connaught deadline is March 1

The Connaught Fund announces that the deadline for research support applications has been put back to March 1. The Fund was established by the Governing Council last May. Its primary purpose is to promote "research and development in medicine and other health sciences, and in other fields where the model of Connaught Medical Research Laboratories may be followed, namely, the application of professional expertise and resources of the University to major problems of public interest."

The Governing Council further ruled that the resources should be applied in a manner that will encourage a coordinated approach to the application of University resources, and will promote the interaction of various disciplines within the University with groups outside, either in the public or the private sector.

The Fund represents the proceeds from the sale in 1972 of the assets of Connaught Medical Research Laboratories to the Canada Development Corporation, the assets of the Connaught Trust Endowment Fund and the proceeds from the sale of valley land in the Townships of North York and Vaughan on the west-

ern perimeter of the lands owned by Connaught Medical Research Laboratories, which were sold to the Metropolitan Toronto and Region Conservation Authority.

Faculty of Medicine to hold Open House

Students of the Faculty of Medicine will be holding Open House on Friday, Feb. 22, from 6.30 to 10 p.m. and on Saturday, Feb. 23, from 10 a.m. till 5 p.m., in the Medical Sciences Building. It is the first to be held since the building was officially opened in 1970.

The many exhibits will centre mainly on the heart and circulatory system and on the brain and nervous system. They will include a film showing the noted Montreal surgeon, Pierre Grondin, performing a human heart transplant operation. Also on display will be a wide variety of equipment, including implantable artificial pacemakers for ailing hearts.

There will be special exhibits by the Ontario Heart Foundation, the Alcoholism and Drug Addiction Research Foundation of Ontario and the Multiple Sclerosis Society.

Forestry Alumni plan seminar and dinner

"See What Tomorrow Brings" is the title of a two part seminar sponsored by the Forestry Alumni Association at the Hyatt Regency Hotel on Wednesday, Feb. 27.

After registration and the association's annual meeting, the seminar will begin about 1.30 p.m., with Harry French presiding at the first part, "Yesterday, Now, Tomorrow", for which the panelists are Raymond Moriyama, architect; R. Vrancart, land use planner, and L. Kumove, social planner. The panelists for the second session, "Vision 2020", with Ron Chopowick as moderator, are to be R. Silversides, Canadian Forestry Service; B. Nevitt, Canadian Development Corporation, and Associate Dean K. Schwarzkopf, Seneca College.

At a dinner for the graduating class, Keith Reynolds, Deputy Provincial Secretary for Resource Development, will be the speaker.

The cost of the seminar and dinner is \$15; for the seminar only, \$5 for alumni and visitors, and \$2 for students. Reservations with remittances should be sent before Feb. 20 to Miss Nora Sage, Alumni House, 47 Wilketts St., University of Toronto, Toronto M5S 1A1.

Forestry deans contend support 'quite inadequate'

The material and financial support currently available to the six schools of forestry in Canadian universities is "quite inadequate", according to a joint statement by the six deans, released to a news conference in Toronto last week.

"The outlook for the years ahead is bleak", states the report, published in co-operation with the Science Council of Canada. "The real challenge lies in obtaining increased support for the schools from their parent universities, from the provincial and federal governments and from the forestry industries."

"But even with increased support, the schools can only succeed in an environment in which they and their supporters work in harmony."

Canada provides 16 per cent of the world's wood pulp and 38 per cent of its newsprint but this fact is only one part of the picture, one consideration in the minds of those who plan the training of Canada's future foresters, Dr. Vidar Nordin, Dean of the U of T Faculty of Forestry told the meeting.

On the preceding day, deputy ministers of resources from across Canada had conferred at U of T on the problem.

Transportation project proposals are invited

The Toronto-York Joint Program in Transportation invites proposals for projects to be carried out during the summer of 1974 and through the academic year 1974-75. All submissions must be a Joint Program application form and must comply with the stipulations outlined in the Conditions Governing Grants.

The Joint Program expects to make \$25,000 available for individual research projects.

The deadline is Friday, March 8, for the submission of two copies of proposals to be directed to the Office of Research Administration, University of Toronto.

Consideration of the proposals by the Toronto-York Joint Committee will be made in the following two weeks. Announcement of the decisions of the Committee will be made as early as possible during March.

IHPST conducting review of activities

The Institute for the History and Philosophy of Science and Technology is conducting a public review of its activities and invites participation by all members of the University community and others interested in the Institute.

Among questions being considered are its role as a centre for interdisciplinary activity, its graduate program, its undergraduate courses, its scope, goals, and procedures, but no topics are excluded. 28 informal communications, or briefs should be sent to Prof. Kenneth O. May or to any member or affiliate of the Institute.

Open meetings for discussion are scheduled for Feb. 28 (role as a centre), March 14 (graduate program), and March 28 (undergraduate courses), all at 4 p.m. in 225 Library Science. Refreshments will be available from 3.30.

Ph.D. Orals

Friday, February 15

Brian H. Barber, Department of Medical Biophysics, "A Nuclear Magnetic Resonance Study of the Protein Concanavalin A." Thesis supervisor: Prof. J. Carver. Room 108, 16 Hart House Circle. 2 p.m.

Friday, March 1

Raymond Di Lorenzo, Department of Medieval Studies, "The Therapy of Epideictic Discourse in Chaucer's Book of the Duchess: Study of a Pictorial Event." Thesis supervisor: Prof. M. Nims. Room 107, 16 Hart House Circle. 3.30 p.m.

Accommodation

Large furnished 4-bedroom house, all appliances, from May 1 to Nov. 1, 1974, for six months or part thereof; north of highway 401, east of Don Valley Parkway; 10 minutes to Scarborough College, 40 to St. George campus. \$400 a month. Mrs. Phillips, 928-4058.

3-bedroom furnished house for rent, June 25-Aug. 25, 1974; Chaplin Crescent and Avenue Rd., close to TTC, shopping and U of T; modern kitchen with dishwasher, finished basement, washer and dryer; large south overlooking garden. \$400 per month including utilities except for telephone. 928-3264; evenings 482-6982.

For rent, furnished 3-bedroom bungalow; with lease; couple without children preferred; 15 minutes to subway by bus, 11 miles to St. George Campus or the Etimide Campus. Sept., 1974 to July 1, 1975. J.B. Currie, Department of Geology, 233-9968.

EXHIBITIONS

Exhibition by Peter Sheffield, structural engineer, who is visiting consultant to Fourth Year Architecture technical workshops. 230 College St. To March 1. (Architecture)

"In Praise of Cities" - by Enid Robbie, a collection of paintings, serigraph prints and drawings. 230 College St. Until March 1. (Architecture)